



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Gastineau *et al.*

Appl. No. 09/536,258

Filed: March 27, 2000

For: Hedging Exchange Traded Mutual Funds  
or Other Portfolio Basket Products

Art Unit: 3628

Examiner: Debra Charles

Atty. Docket: 00322.0007.NPUS00

**Declaration of Charles A. Baker Under 37 C.F.R. § 1.132**

I, Charles A. Baker, do hereby declare the following:

1. I attended California Polytechnic State University at San Luis Obispo, and earned a B.S. in Economics in 1975. After that, I attended Claremont Graduate University, where I earned an M.B.A. in 1978.
2. From 1984-1991, I worked with Leland O'Brien Rubinstein (LOR), an investment management firm. In 1988, at LOR, we created the "Super Trust," which was an early predecessor of the exchange-traded fund (ETF).
3. I began working for Alpha Strategies, LLC in 1999, doing product development and marketing of new ETF products. Alpha Strategies began a relationship with the American Stock Exchange at that time with the objective of developing a technology that would enable the creation of exchange-traded funds that are actively managed.
4. In 2003, I was hired by the American Stock Exchange ("AMEX") to work on the development of Actively Managed Exchange Traded Funds ("AMETFs"). My current position with the AMEX is Managing Director for New Product Development, and my primary responsibilities include the development and marketing of AMETFs.
5. I am familiar with the specification, claims, and drawings of the '258 application.
6. I have read the currently pending claims in the '258 application, which are attached hereto as **Exhibit A**. These claims are clearly understandable and sufficiently definite enough for those skilled in the financial industry, to whom the invention is directed, to understand their scope and meaning.
7. The AMEX's motivation for pursuing technology to allow AMETFs was the well-recognized industry demand for such a technology. For example, the Securities and Exchange Commission ("SEC") issued a concept release in 2001, which recognized that "the concept of an 'actively managed ETF' has attracted significant attention" but noted that, even as of 2001, "many of the details regarding the potential operations of actively

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managed ETFs are apparently still in development." See SEC Concept Release No. IC-25258: "Actively Managed Exchange-Traded Funds" (November 2001).

8. The industry demand was likewise recognized in the Wall Street Journal in May 2000, in an article which noted that several mutual fund companies "are interested in launching actively managed exchange-traded funds." See Lucchetti, "Firms May Explore Funds That Trade on Stock Markets," The Wall Street Journal (May 16, 2000).
9. Despite industry interest and efforts, however, prior to the invention that is claimed in the '258 application (and other pending applications assigned to the AMEX), no technology existed that would allow exchange-trading of actively managed funds.
10. Several technical hurdles had to be overcome in order to allow AMETFs. One of the greatest of those hurdles was the so-called "transparency issue." All previous ETFs were based on publicly available indices, such as the S&P 500, on which SPDR ETFs are based. Existing ETFs are thus "transparent," i.e., investors are aware, on a day-to-day basis, of the holdings of the ETFs. The transparency of ETFs allows investors to: (1) determine an intraday value for shares of ETFs (based on the value of the securities underlying the ETFs) in order to determine a fair trading price, and (2) hedge the positions they have taken in ETFs in order to balance investment risk.
11. Actively managed funds, on the other hand, are generally *not* transparent, that is, the fund holdings are not disclosed to investors or the public at large on a daily basis. Instead, disclosures of actively managed fund holdings occur much less frequently, e.g., quarterly, and typically do not reflect the current fund holdings, but rather reflect the fund holdings as they were at some substantially earlier time, e.g., a month earlier. The reason that actively managed funds are not transparent is that the managers of such funds want to prevent other investors from "free riding" – benefiting from the funds' expert management without payment of the funds' management fees and expenses, and from "front running" – buying or selling shares of stocks that fund managers are in the process of buying or selling in order to benefit from the funds' effect on the market price of those shares.
12. Therefore, in order to introduce AMETFs, a technology was needed that preserved the lack of transparency of actively managed funds, but still provided investors with sufficient information to (1) determine a fair share price for shares of AMETFs, and (2) to hedge their investments in AMETFs in order to balance investment risk.
13. The need to overcome the "transparency problem" in order to introduce AMETFs was well recognized in the industry. For example, in September 2000, the Wall Street Journal, Europe recognized that AMETFs would have "huge hurdles" to overcome, and in 2001, Sovereignwealth.com recognized that "portfolio transparency issues must be resolved" before AMETFs could be introduced. See Hayashi, "Managed & Personal Investing: New Generation of ETFs on Horizon," Wall Street Journal Europe (September 26, 2000); <http://www.sovereignwealth.com/ETF%20Fact%20Sheet.htm> (2001).

14. A recent article in the Wall Street Journal noted the "transparency problem," and touted the AMEX's solution: "The main hurdle to constructing actively managed ETFs has to do with overcoming issues of transparency. With index-tracking ETFs, investors know exactly what's inside and, therefore, how shares should be valued. But if active managers bare their holdings, they risk giving other investors a chance to mirror their strategies while ETF investors pay the fees. ... The American Stock Exchange says it has developed a way to overcome those issues: don't reveal the underlying holdings of the actively managed ETF, but instead construct a tracking portfolio with the same risk characteristics." See Bernard, "Next Wave in ETFs: Actively Managed Portfolios," Wall Street Journal (January 11, 2005).
15. The AMEX's solution as described in the Wall Street Journal article by Bernard is what is claimed in the '258 application. The AMEX does not reveal the underlying holdings of the AMETF; rather, as stated in claim 1, "the specific securities in the actively managed exchange traded fund are unknown." The AMEX instead develops and constructs a tracking portfolio with the same risk characteristics, as stated in claim 1, "a hedging portfolio with substantially the same sensitivities to the factors that affect the value of the fund holdings." By virtue of the features claimed, the AMEX has solved the transparency problem by allowing investors (1) to determine a fair price for shares of AMETFs without disclosing (or even knowing) the composition of the securities of the underlying fund, and (2) to hedge their investments in the AMETF in order to balance their investment risks.
16. The financial industry has greeted the AMEX's solution with acclaim. In addition to the Bernard Wall Street Journal article, the Financial Research Corp. was likewise impressed with the AMEX's invention: "It seems that only a few rocket scientists at the American Stock Exchange...have the ability to envision the mechanics of putting together an actively managed ETF." See Quill *et al.*, "The Future of Exchange Traded Funds," Financial Research Corporation publication (May 31, 2000).
17. It is clear that there was a significant demand for AMETFs at the time of the application for the '258 patent, but no one else knew how to solve the transparency problem. It is also clear that the AMEX's solution to that problem, as reflected in the claims of the '258 application, was not obvious as of the March 27, 2000 filing date of the '258 application.

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
By: Charles A. BakerDate: 3/18/05

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**Exhibit A: Claims Pending in U.S. Patent Application Serial No. 09/536,258 as of September 24, 2004**

1. A method of hedging investment risk in an actively managed exchange traded fund, comprising:
  - receiving or determining factor information about the actively managed exchange traded fund holdings, wherein one or more computers programmed with factor analysis software determine the factor information, which measures sensitivities of the fund holdings to factors that affect the value of the fund holdings; and
  - using one or more computers with the factor information as an input to select a portfolio of financial instruments to produce a hedging portfolio with substantially the same sensitivities to the factors that affect the value of the fund holdings,wherein the specific securities in the actively managed exchange traded fund are unknown to an entity who uses the hedging portfolio to hedge against an investment in the actively managed exchange traded fund.
2. The method of claim 1 wherein the hedging portfolio tracks the price of the fund.
3. The method of claim 1 further comprising:
  - using the hedging portfolio to hedge a position taken in the exchange traded fund.
4. The method of claim 1 further comprising:
  - applying factor analysis to the portfolio of the exchange traded fund to determine the sensitivity of the fund to the factors.
5. The method of claim 3 wherein the applying step occurs in a trusted computer system.
6. The method of claim 1 wherein the factors include economic activity, inflation rates or other factors that are related to measures of economic activity.
7. The method of claim 1 further comprising:
  - selecting a group of securities, and
  - constructing the hedging portfolio based upon weightings and selections of securities from the group of securities.
8. A computer program product residing on a computer readable medium for hedging investment risk in actively managed exchange traded funds comprising instructions for causing a computer to:
  - receive or determine factor information about the actively managed exchange traded fund holdings, wherein the factor information measures sensitivities of the fund to factors that affect the price of the fund holdings; and
  - select a portfolio of financial instruments to produce a hedging portfolio with substantially the same sensitivities to the factors that affect the value of the fund holdings,wherein the specific securities in the actively managed exchange traded fund are unknown to an entity who uses the hedging portfolio to hedge against an investment in the actively managed exchange traded fund.

9. The computer program product of claim 8 wherein the hedging portfolio tracks the price of the fund.
10. The computer program product of claim 8 further comprising instructions to:  
use the hedging portfolio to hedge a position taken in the exchange traded fund.
11. The computer program product of claim 8 further comprising instructions to:  
apply factor analysis to the exchange traded fund to determine the sensitivity of the fund holdings to the factors.
12. The computer program product of claim 11 wherein the factor analysis is applied in a trusted computer system.
13. The computer program product of claim 8 wherein the factors include economic activity, inflation rates or other factors that are related to measures of economic activity.
14. The computer program product of claim 8 further comprising instructions to:  
select a group of securities, and  
construct the hedging portfolio based upon weightings of and selections from the group of securities.
15. A computer system for producing a hedging portfolio for hedging investment risk in actively managed exchange traded funds, comprising:  
a trusted computer system; and  
a computer storage medium storing a computer program product for determining the basket of instruments for hedging investment risk, comprising instructions for causing the computer to:  
receive or determine factor information about the actively managed exchange traded fund holdings, wherein the factor information measures sensitivities of the fund holdings to factors that affect the price of the fund; and  
select a portfolio of financial instruments to produce a hedging portfolio with substantially the same sensitivities to the factors that affect the value of the fund, wherein the specific securities in the actively managed exchange traded fund are unknown to an entity who uses the hedging portfolio to hedge against an investment in the actively managed exchange traded fund.
16. The system of claim 15 wherein the computer program further comprises instructions to:  
use the hedging portfolio to hedge a position taken in the exchange traded fund.
17. The system of claim 15 further comprising instructions to:  
apply factor analysis to the exchange traded fund to determine the sensitivity of the fund holdings to the factors.
18. The system of claim 15 wherein the factors include economic activity, inflation rates or other factors that are related to measures of economic activity.
19. The system of claim 15 wherein the computer program further comprises instructions to:

select a group of securities, and  
construct the hedging portfolio based upon weightings of and selections from the group of securities.

20. A method of calculating an intra-day value proxy for an actively managed exchange traded fund, comprising:

producing a hedging portfolio to track an actively managed exchange traded fund by receiving or determining factor information about the fund holdings, wherein one or more computers programmed with factor analysis software determine the factor information, which measures sensitivities of the fund holdings to factors that affect the price of the fund;

using one or more computers with the factor information as an input to select a portfolio of financial instruments to produce a hedging portfolio with substantially the same sensitivities to the factors that affect the value of the fund; and

applying current prices to the hedging portfolio to determine the intra-day value proxy value for the exchange traded fund.